Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

Please cancel claims 1-18 and add claims 19-25 as follows:

1-18 (Cancelled)

19. (New) A method for encoding data bits for transmission comprising:

generating a first biphasic pulse having a first portion of a first polarity followed by a second portion of a second polarity;

waiting a period of time following the second portion of the first biphasic pulse during which period of time no amplitude dependent data bits are encoding, the duration of the period of time being selected to represent a plurality of data bits; and

generating a second biphasic pulse following the period of time, the second biphasic pulse having a third portion of the second polarity and a fourth portion of the first polarity.

20. (New) The method of claim19, wherein each biphasic pulse has no DC component.

21. (New) The method of claim 20, wherein each of the portions of the first and second biphasic pulses are single polarity pulses having an amplitude and a pulse width.

22. (New) The method of claim 21, wherein the amplitude of the single polarity pulses represents at least one data bit.

23. (New) The method of claim 22, wherein the pulse width of each of the single polarity pulses represents at least one data bit.

24. (New) The method defined by claim 19, including the step of transmitting a signal generated by the steps of claim 19 onto a twisted pair line.

25. (New) A method for decoding data bits from a received signal comprising:

detecting a first biphasic pulse having at least a first polarity, the first biphasic pulse having been transmitted with a first portion of a first polarity and a second portion of a second polarity;

detecting a second biphasic pulse having at least a second polarity, the second biphasic pulse having been transmitted with a third portion of a second polarity and a fourth portion of a first polarity;

measuring the time between the first and second biphasic pulses; and

correlating the measured time to a plurality of data bits.